# Pension Wealth Derived Variables User Guide (v2) ♣

## 1. Introduction

This document describes how to use the derived pension wealth variables for ELSA Wave 1. More information on the derivation of these variables and all the areas discussed below is available in Banks, Emmerson and Tetlow (2005), *Estimating Pension Wealth of ELSA Respondents*, IFS Working Paper, WP 05/09 (www.ifs.org.uk/wps/wp0509.pdf).

The pension wealth derived variables give the discounted present value of the stream of income that an individual will receive from their pensions between starting to draw these pensions and death, under various alternative scenarios. These variables are derived from information on individuals' current and past circumstances from the Work and Pensions module[1] of ELSA Wave 1 along with various assumptions about past and future behaviour.

Two central measures of pension wealth are available. First there is wealth from private pensions. Second there is wealth from state pension schemes (from the first tier, BSP, and the second tier, SERPS/S2P). The sum of these two sources of pension wealth gives total pension wealth. Unlike most other measures of wealth in the ELSA dataset, pension wealth has been derived at the individual level. Pension wealth estimates are included for all individuals in ELSA, including sample members and non-sample members.

Section 2.1 describes the baseline measures of pension wealth (PRIPENW1_2002, STATEPENW1_2002). These show how much pension wealth an individual has if he stops accruing further pension entitlement beyond 2002, under the baseline assumptions. Section 2.2 goes on to describe an alternative measure of pension wealth under the baseline assumptions (PRIPENW1_SPA, STATEPENW1_SPA), namely the wealth an individual would have if he works and accrues pension entitlements until he reaches the state pension age (SPA).

Section 3 describes the remaining pension wealth variables that are included in the dataset, for users who are interested in the effect of altering the baseline assumptions. These additional variables are state and private pension wealth under eight alternative assumption scenarios – lower and higher discount rates with lower and higher rates of contracting out of the state second tier pension.

Section 4 briefly explains how to use these variables and addresses some common issues that users may encounter.

Finally, Section 5 describes two additional variables that indicate what type of pension scheme an individual was a member of at the time of the Wave 1 interview.

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[1] Where the respondent did not know or refused to give relevant information we imputed a value. For a full description of the imputation methods used, see Banks, Emmerson and Tetlow (2005).

## 2. Baseline pension wealth estimates

### 2.1 Pension wealth assuming retirement in 2002

*Variable names*

| | |
|---|---|
| PRIPENW1_2002 | private pension wealth under the baseline assumptions (retire in 2002) |
| STATEPENW1_2002 | state pension wealth under the baseline assumptions (retire in 2002) |

The amount of pension wealth that an individual will have when he retires depends in part on when he chooses to retire. Since we do not know when an individual will retire, the first measure of private and state pension wealth (PRIPENW1_2002, STATEPENW1_2002) assumes that each individual retires in 2002, and so accrues no further pension entitlements beyond what he had at the time he was interviewed in Wave 1.

#### *2.1.1 Private pension wealth*

Total private pension wealth is the sum of pension wealth from three sources:

- Defined benefit (DB) pension schemes that an individual is currently a member of.
- Defined contribution (DC) pension schemes that an individual is currently a member of.
- Pension schemes that an individual used to be a member of but no longer is, but to which he has retained rights (or from which he is already drawing a pension).

#### *2.1.2 State pension wealth*

Total state pension wealth is the sum of pension wealth from the first and second tiers of the state pension system:

- First tier (Basic State Pension, BSP) – entitlement accrued for each year an individual has worked and earned above a certain level between age 16 and the State Pension Age (SPA), with additional credits being given for periods when an individual was carrying out certain caring activities or bringing up children.
- Second tier (State Earnings-Related Pension, SERPS, and State Second Pension, S2P) – SERPS provided an additional pension proportional to average individual earnings in all years of an individual's working life between 1978 and 2002. S2P, which replaced SERPS in 2002, is a similar system but grants more generous accrual to carers and low earners.

### *2.1.3 Assumptions*

Various assumptions were made in estimating the pension wealth of individuals in ELSA. These are described in much greater detail in Banks, Emmerson and Tetlow (2005). Some of these assumptions have little effect on overall pension wealth (sensitivity analysis of the main assumptions is presented in Banks, Emmerson and Tetlow (2005)). However, two key assumptions do affect the level of pension wealth:

- Discount rate – the rate at which individuals are assumed to discount future income has a significant effect on the level of their pension wealth. In our baseline scenario, we assume a 2.5% real discount rate. See below for a discussion of the pension wealth variables that are available under alternative discount rates. The discount rate chosen affects both state and private pension wealth.

- Contracting out – whether or not an individual has been contracted into the state second tier pension during years when he was in a private pension scheme will affect the amount of state pension wealth he has accrued. In our baseline scenario, we make an intermediate assumption about whether individuals have been contracted in or out – see Appendix 2 for an outline of the circumstances under which we assume an individual was contracted in/out. Pension wealth variables are also available under alternative contracting out assumptions, which are discussed below.

## 2.2 Pension wealth assuming retirement at the SPA

*Variable names*

| | |
|---|---|
| PRIPENW1_SPA | private pension wealth under the baseline assumptions (retire at SPA) |
| STATEPENW1_SPA | state pension wealth under the baseline assumptions (retire at SPA) |

Section 2.1 described the measures of pension wealth calculated on the basis of every individual ceasing to accrue further pension entitlements beyond 2002. However, particularly for younger individuals in the ELSA sample, this will be rather an extreme assumption. Therefore, pension wealth estimates are also given on the basis that all individuals (including those not in employment in 2002) work (and thus accrue additional pension entitlement[2]) between 2002 and reaching the SPA. These variables are PRIPENW1_SPA and STATEPENW1_SPA. To estimate pension wealth under this assumption, all individuals who were in work in 2002 are assumed to have the same real income in future years as they did in 2002. Individuals who were out of work in 2002 had a wage rate imputed for them and they are assumed to earn this real wage in all future years (for more details see Banks, Emmerson and Tetlow, 2005).

Individuals are assumed to accrue additional pension entitlements in the following way:

- Current DB pensions – individuals accrue an additional year of entitlement for each year between 2002 and reaching the SPA.
- Current DC pensions – individuals are assumed to continue to contribute the same proportion of their salary in future years as they did in 2002.
- BSP – individuals are assumed to accrue an additional year of entitlement for each year between 2002 and when they reach the SPA.
- S2P – all individuals are assumed to accrue additional S2P entitlement in proportion to their earnings in all years between 2002 and reaching the SPA if they are assumed to have been contracted into the state second tier pension in 2002.

[2] This means that out of work individuals are assumed to accrue state pension entitlements in future years as if they were in work earning their simulated wage. Out of work individuals accrue private pension wealth in the same way in future years as they did in 2002.

## 3. Alternative assumptions

### 3.1 Alternative discount rates

It is possible that individuals may discount the future less or more than the baseline figures assume (i.e. 2.5% real discount rate). Therefore, pension wealth measures have also been included under the assumptions of two alternative discount rates. First, using the baseline assumptions about contracting-out, private and state pension wealth figures are included on the basis of a 1.5% discount rate, for retirement in 2002 (PRIPENW4_2002, STATEPENW4_2002) and at the SPA (PRIPENW4_SPA, STATEPENW4_SPA). Second, again using the baseline assumptions about contracting-out, private and state pension wealth figures are included on the basis of a 3.5% discount rate, for retirement in 2002 (PRIPENW7_2002, STATEPENW7_2002) and at the SPA (PRIPENW7_SPA, STATEPENW7_SPA).

### 3.2 Alternative contracting out assumptions

Whether or not an individual has been contracted out during their lifetime will affect how much state pension wealth he has accrued. Therefore, pension wealth estimates are also provided under two alternative (more extreme) assumptions about previous contracting-out history than the baseline case.

First, (using the baseline, 2.5%, discount rate) pension wealth estimates are presented assuming that all individuals have been contracted into the state second tier pension scheme during periods when they were members of private pension schemes. (A detailed description of under exactly which circumstances an individual is assumed to be contracted in is given in Appendix 2). These pension wealth estimates are presented assuming retirement in 2002 (PRIPENW2_2002, STATEPENW2_2002) and assuming retirement at the SPA (PRIPENW2_SPA, STATEPENW2_SPA).

Second, (using the baseline, 2.5%, discount rate) pension wealth estimates are presented assuming that all individuals have been contracted out of the state second tier pension scheme during all periods when they were members of a private pension scheme. (A detailed description of under exactly which circumstances an individual is assumed to be contracted out is given in Appendix 2). These pension wealth estimates are presented assuming retirement in 2002 (PRIPENW3_SPA, STATEPENW3_SPA) and assuming retirement at the SPA (PRIPENW3_SPA, STATEPENW3_SPA).

In addition to the scenarios already described, pension wealth estimates under the other four possible combinations of assumptions are also available:

- 1.5% discount rate, all contracted in (PRIPENW5_2002, STATEPENW5_2002, PRIPENW5_SPA, STATEPENW5_SPA);
- 1.5% discount rate, all contracted out (PRIPENW6_2002, STATEPENW6_2002, PRIPENW6_SPA, STATEPENW6_SPA);

- 3.5% discount rate, all contracted in (PRIPENW8_2002, STATEPENW8_2002, PRIPENW8_SPA, STATEPENW8_SPA);
- 3.5% discount rate, all contracted out (PRIPENW9_2002, STATEPENW9_2002, PRIPENW9_SPA, STATEPENW9_SPA);

## 4. How to use the derived variables

All pension wealth variables are expressed in 2002 discounted present value terms, using a 2.5% discount rate in the baseline scenario (pension wealth using alternative discount rates is also available, as discussed in section 3). The main variables are those under the assumptions of 2.5% discount rate and baseline contracting out assumptions. The other variables are included for researchers who are interested in the effect of varying the assumptions on resulting pension wealth.

The variables are derived at the individual level. The pension wealth measures give the discounted present value of the pension income the individual will receive during his lifetime, plus, in the case of private pension wealth and state second tier pension wealth[3], the discounted present value of the income the individual's spouse will receive after the individual dies (i.e. the discounted present value of the survivor benefits).

### 4.1 Types of variables

a) Variables ending in _2002 refer to pension wealth under the assumption that the individual ceases to accrue pension entitlements beyond 2002.

b) Variables ending in _SPA refer to pension wealth under the assumption that the individual continues to accrue pension entitlement until he reaches the SPA.

c) Variables beginning pripenw refer to private pension wealth.

d) Variables beginning statepenw refer to state pension wealth.

e) The number preceding the _2002 or _SPA suffix indicates under which set of assumptions that estimate of pension wealth was made. The sets of assumptions are as follows:

   1) BASELINE: 2.5% discount rate, baseline contracting-out assumptions.

   2) 2.5% discount rate, all contract-in.

   3) 2.5% discount rate, all contracted-out.

   4) 1.5% discount rate, baseline contracting-out assumptions.

   5) 1.5% discount rate, all contracted-in.

   6) 1.5% discount rate, all contracted-out.

   7) 3.5% discount rate, baseline contracting-out assumptions.

   8) 3.5% discount rate, all contracted-in.

   9) 3.5% discount rate, all contracted-out.

[3] Any additional BSP income that an individual's spouse becomes entitled to after his death (on the basis of his entitlement) is counted in the pension wealth of the spouse rather than in the pension wealth of the original individual.

### 4.2 Retirement in 2002 or at the SPA?

As mentioned in Section 2, pension wealth estimates are available either on the basis of individuals ceasing to accrue any further pension entitlements after 2002, or on the basis of individuals working and accruing entitlements until the SPA. Since immediate retirement is a rather extreme assumption for employed individuals and continuous work until the SPA is rather extreme for currently inactive individuals, an alternative that some users may wish to consider is to create a composite pension wealth measure from the two alternatives available. Taking the two groups separately (those who were employed and those who were inactive in 2002), users could assume employed individuals remain in employment until the SPA, whereas inactive individuals never return to work. Thus PRIPENW1_2002 and PRIPENW1_SPA (and similarly STATEPENW1_2002 and STATEPENW1_SPA) could be combined to produce a measure of pension wealth with perhaps more realistic underlying assumptions about future employment.

### 4.3 Individuals aged over the SPA

In the case of individuals who are already aged over the SPA, an alternative estimate of their state pension wealth could be found using the income they actually receive from state pensions, as reported in the Income and Assets module, rather than the estimated state pension wealth figures described here. This will not, of course, be the case for individuals who have deferred their state pensions (i.e. people over the SPA who do not currently receive any state pension income but who will in future receive higher state pension income as a result).

## 5. Additional variables

In addition to the measures of current and future pension wealth, this dataset also contains five variables which indicate what type of pension(s) an individual was a member of at the time they were interviewed in Wave 1.

### PEN_DB

The variable pen_db shows whether an individual is currently a member[4] of a defined benefit pension scheme.

### PEN_DC

The variable pen_dc shows whether an individual is currently a member of a defined contribution pension scheme. This may be a scheme offered by their employer or a private pension scheme that they have taken out themselves.

### PEN_DK

The variable pen_dk shows whether an individual is currently a member of a private pension scheme that they do not know the 'type' of (i.e. they are unsure whether it is defined benefit or defined contribution in nature).

The variables pen_db, pen_dc and pen_dk are not mutually exclusive. All respondents are allowed to mention up to two current pension schemes. Therefore, any two of these three variables could take the value 1 for any individual.

### PEN_ANY

This variable shows whether or not a respondent is a member of any form of current private pension scheme. This variable can take any one of three values: has a private pension, has no private pension or doesn't know. The latter category applies for those 36 individuals who, at all points when asked about whether they were currently a member of a private pension scheme, said that they did not know.

The Stata syntax for creating each of these four variables is given in Appendix 3.

### PUBPEN

This variable indicates whether an individual is currently a member of a public sector pension scheme. This variable was derived from text-fill answers about the name of the pension scheme to which the individual belongs (the variables used, wpnps and wpnps2, are listed in the Wave 1 questionnaire but are not available in the public release data). Using the pension scheme name, individuals were picked out whose

[4] Current membership means an individual currently either makes contributions to the pension scheme themselves or whose employer is making contributions on their behalf or, the case of defined contribution schemes those who could (if they wanted to) make contributions to a pension scheme. In other words, those who are receiving a pension from a private pension scheme are not classified here as "currently" being a member.

scheme name suggested that it was a scheme offered by a public sector employer (such as the NHS, a local authority or the armed forces).

This variable is only designed to give a broad indication of the type of scheme to which the individual belongs. It relies on self-reported scheme name, which was not asked with the specific intention of ascertaining whether or not a public or private sector employer operated the scheme. Therefore, it is possible that the name given by the respondent may suggest that it is a public sector scheme when in fact it is not and vice versa. For example, virtually all pension schemes offered by the public sector are defined benefit. However, of those schemes identified (on the basis of scheme name) as being likely to be public sector schemes, about 9% were described as being defined contribution schemes by the respondent. This could indicate that the scheme is in fact not a public sector scheme, or could indicate that the respondent was confused about how their final pension income would be determined.

## Appendix 1

## List of Pension Wealth Variables

| | |
|---|---|
| PRIPENW1_2002 | BASELINE - private pension wealth assuming 2.5% discount rate, baseline contracting out assumptions, retire in 2002 |
| STATEPENW1_2002 | BASELINE - state pension wealth assuming 2.5% discount rate, baseline contracting out assumptions, retire in 2002 |
| PRIPENW1_SPA | BASELINE - private pension wealth assuming 2.5% discount rate, baseline contracting out assumptions, retire at SPA |
| STATEPENW1_SPA | BASELINE - state pension wealth assuming 2.5% discount rate, baseline contracting out assumptions, retire at SPA |
| PRIPENW2_2002 | private pension wealth assuming 2.5% discount rate, all contracted in, retire in 2002 |
| STATEPENW2_2002 | state pension wealth assuming 2.5% discount rate, all contracted in, retire in 2002 |
| PRIPENW2_SPA | private pension wealth assuming 2.5% discount rate, all contracted in, retire at SPA |
| STATEPENW2_SPA | state pension wealth assuming 2.5% discount rate, all contracted in, retire at SPA |
| PRIPENW3_2002 | private pension wealth assuming 2.5% discount rate, all contracted out, retire in 2002 |
| STATEPENW3_2002 | state pension wealth assuming 2.5% discount rate, all contracted out, retire in 2002 |
| PRIPENW3_SPA | private pension wealth assuming 2.5% discount rate, all contracted out, retire at SPA |
| STATEPENW3_SPA | state pension wealth assuming 2.5% discount rate, all contracted out, retire at SPA |
| PRIPENW4_2002 | private pension wealth assuming 1.5% discount rate, baseline contracting out assumptions, retire in 2002 |
| STATEPENW4_2002 | state pension wealth assuming 1.5% discount rate, baseline contracting out assumptions, retire in 2002 |
| PRIPENW4_SPA | private pension wealth assuming 1.5% discount rate, baseline |

| | |
|---|---|
| | contracting out assumptions, retire at SPA |
| STATEPENW4_SPA | state pension wealth assuming 1.5% discount rate, baseline contracting out assumptions, retire at SPA |
| PRIPENW5_2002 | private pension wealth assuming 1.5% discount rate, all contracted in, retire in 2002 |
| STATEPENW5_2002 | state pension wealth assuming 1.5% discount rate, all contracted in, retire in 2002 |
| PRIPENW5_SPA | private pension wealth assuming 1.5% discount rate, all contracted in, retire at SPA |
| STATEPENW5_SPA | state pension wealth assuming 1.5% discount rate, all contracted in, retire at SPA |
| PRIPENW6_2002 | private pension wealth assuming 1.5% discount rate, all contracted out, retire in 2002 |
| STATEPENW6_2002 | state pension wealth assuming 1.5% discount rate, all contracted out, retire in 2002 |
| PRIPENW6_SPA | private pension wealth assuming 1.5% discount rate, all contracted out, retire at SPA |
| STATEPENW6_SPA | state pension wealth assuming 1.5% discount rate, all contracted out, retire at SPA |
| PRIPENW7_2002 | private pension wealth assuming 3.5% discount rate, baseline contracting out assumptions, retire in 2002 |
| STATEPENW7_2002 | state pension wealth assuming 3.5% discount rate, baseline contracting out assumptions, retire in 2002 |
| PRIPENW7_SPA | private pension wealth assuming 3.5% discount rate, baseline contracting out assumptions, retire at SPA |
| STATEPENW7_SPA | state pension wealth assuming 3.5% discount rate, baseline contracting out assumptions, retire at SPA |
| PRIPENW8_2002 | private pension wealth assuming 3.5% discount rate, all contracted in, retire in 2002 |
| STATEPENW8_2002 | state pension wealth assuming 3.5% discount rate, all contracted in, retire in 2002 |
| PRIPENW8_SPA | private pension wealth assuming 3.5% discount rate, all |

| | |
|---|---|
| | contracted in, retire at SPA |
| STATEPENW8_SPA | state pension wealth assuming 3.5% discount rate, all contracted in, retire at SPA |
| PRIPENW9_2002 | private pension wealth assuming 3.5% discount rate, all contracted out, retire in 2002 |
| STATEPENW9_2002 | state pension wealth assuming 3.5% discount rate, all contracted out, retire in 2002 |
| PRIPENW9_SPA | private pension wealth assuming 3.5% discount rate, all contracted out, retire at SPA |
| STATEPENW9_SPA | state pension wealth assuming 3.5% discount rate, all contracted out, retire at SPA |

# Appendix 2

## Contracting-out assumptions

### Baseline contracting out assumptions

*Current contracting out status*

- If an individual is known to currently be contracted out (in), he is assumed to be contracted out (in) in the current year.
- If an individual's current contracting out status is unknown (all those not in an employer scheme), we assume he is contracted in.
- Unless, he is currently in an employer DB scheme, in which case he is assumed to currently be contracted out.
- If an individual has an S226 pension or is self-employed, he is assumed to be contracted out.
- If a woman has ever paid reduced rate NI contributions, she is assumed to accrue no SERPS/S2P entitlement in the current period.

*Contracting out status (1978-1988)*[5]

- An individual is assumed to have been contracted out during any one year in this period if he was a member of a private pension during that year.
- Anyone who is currently over the SPA and is currently receiving income from a private pension is assumed to have been contracted out during these years.
- Anyone who is currently self-employed is assumed to have accrued no SERPS entitlement during these years.
- Any woman who has ever paid NI at the reduced rate is assumed to have accrued no SERPS entitlement during these years.

*Contracting out status (1989-2001)*

- If an individual is a member of a private pension in 2002, their contracting out status during these years (if they were a member of the same scheme) is assumed to be the same as it is in 2002 – see above for assumptions about current contracting out status.
- If an individual was a member of a past pension scheme during any one of these years, he is assumed to have been contracted out during that year.

[5] During the period 1978-1988, the majority of employer-provided DB schemes were contracted out. The condition was that they had to provide benefits at least as generous as those provided by SERPS. These were by far the majority of private pensions at the time.

- Anyone who is currently self-employed is assumed to have accrued no SERPS entitlement during these years.
- Any woman who has ever paid NI at the reduced rate is assumed to have accrued no SERPS entitlement during these years.

*Contracting out status (2003 onwards)*

- All individuals are assumed to have the same contracting out status in future years as they do in 2002 (until they reach the SPA, at which point everyone ceases to be able to accrue further S2P entitlements).

**All contracted in**

*Current contracting out status*

- All individuals are assumed to be contracted-in in 2002. The only exception is women who have ever paid reduced rate NI contributions, who are assumed not to accrue any SERPS/S2P entitlement in 2002.

*Contracting out status (1978-1988)*

- An individual is assumed to have been contracted out during any one year in this period if he was a member of a private pension during that year.
- Anyone who is currently over the SPA and is currently receiving income from a private pension is assumed to have been contracted out during these years.
- Anyone who is currently self-employed is assumed to have accrued no SERPS entitlement during these years.
- Any woman who has ever paid NI at the reduced rate is assumed to have accrued no SERPS entitlement during these years.
- All other individuals are assumed to have been contracted in.

*Contracting out status (1989-2001)*

- All individuals are assumed to have been contracted in during these years, except women who have ever paid NI at the reduced rate who are assumed to have accrued no SERPS entitlement during these years.

*Contracting out status (2003 onwards)*

- All individuals are assumed to have the same contracting out status in future years as they do in 2002 (until they reach the SPA, at which point everyone ceases to be able to accrue further S2P entitlements).

**All contracted out**

*Current contracting out status*

- All individuals in a current private pension scheme are assumed to be contracted out.
- If an individual is self-employed, he is assumed to be contracted out.
- If a woman has ever paid reduced rate NI contributions, she is assumed to accrue no SERPS/S2P entitlement in the current period.

*Contracting out status (1978-1988)*

- An individual is assumed to have been contracted out during any one year in this period if he was a member of a private pension during that year.
- Anyone who is currently over the SPA and is currently receiving income from a private pension is assumed to have been contracted out during these years.
- Anyone who is currently self-employed is assumed to have accrued no SERPS entitlement during these years.
- Any woman who has ever paid NI at the reduced rate is assumed to have accrued no SERPS entitlement during these years.

*Contracting out status (1989-2001)*

- If an individual is a member of a private pension in 2002, their contracting out status during these years (if they were a member of the same scheme) is assumed to be the same as it is in 2002 – see above for assumptions about current contracting out status.
- If an individual was a member of a past pension scheme during any one of these years, he is assumed to have been contracted out during that year.
- Anyone who is currently self-employed is assumed to have accrued no SERPS entitlement during these years.
- Any woman who has ever paid NI at the reduced rate is assumed to have accrued no SERPS entitlement during these years.

*Contracting out status (2003 onwards)*

- All individuals are assumed to have the same contracting out status in future years as they do in 2002 (until they reach the SPA, at which point everyone ceases to be able to accrue further S2P entitlements).

## Appendix 3

**Stata syntax to generate pension type indicator variables**

```
egen pen_dk = anymatch(wpdps wppdes wppdes2), v(3,-8,-9)

replace pen_dk = 1 if wpkp==-8|wpkp==-9|wpkp2==-8|wpkp2==-9

egen pen_db = anymatch(wpdps wppdes wppdes2), v(2)

gen pen_dc = wpdps==1|wppdes==1|wppdes2==1|(wpkp>1 & wpkp<7)|(wpkp2>1 &
wpkp2<7)

gen pen_any = -8 if wpcps==-8|wpcps==-9|wpcpsc==-8|wpcpsc==-9|wpcps2==-
8|wpcps2==-9|wpcpsc2==-8|wpcpsc2==-9|wpps==-8|wpps==-9

replace pen_any =  1 if pen_dk|pen_db|pen_dc

replace pen_any =  0 if pen_any==.
```

**SPSS syntax to generate pension type indicator variables**

```
compute pen_dk=0.

if (wpdps=3 or wpdps=-8 or wpdps=-9 or wppdes=3 or wppdes=-8 or wppdes=-9 or
wppdes2=3 or wppdes2=-8 or wppdes2=-9 or wpkp=-8 or wpkp=-9 or wpkp2=-8 or
wpkp2=-9) pen_dk=1.


compute pen_db=0.

do if any (wpdps, wppdes, wppdes2, 2).
compute pen_db=1.
end if.

compute pen_dc=0.
if (wpdps=1 or wppdes=1 or wppdes2=1 or (wpkp>1 and wpkp<7) or (wpkp2>1 and
wpkp2<7)) pen_dc=1.

compute pen_any=0.
if (wpcps=-8 or wpcps=-9 or wpcpsc=-8 or wpcpsc=-9 or wpcps2=-9 or wpcpsc2=-9
or wpcpsc2=-9 or wpps=-8 or wpps=-9) pen_any=-8.
if (pen_dk=1 or pen_dc=1 or pen_db=1) pen_any=1.

execute.
```